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that so steadily glare on him, and walks away with his tail between his legs.

And here we must end for the present our most imperfect sketches of the men and brutes of South Africa. At some future period we may perhaps resume them.

ART. II. — A Treatise on Etherization in Childbirth, illustrated by Five hundred and eighty-one Cases. By Walter Channing, M. D., Professor of Midwifery and Medical Jurisprudence in Harvard University. Boston: William D. Ticknor & Co. 1848. 8vo. pp. 400.

PERHAPS no discovery in the present age has excited so much interest, or been welcomed with such general exultation, as that of etherization as an antidote to pain. The philosopher and the moralist may portray in glowing colors the advantages of pain, the noble powers of mind which it calls forth, and its use in exciting all the better feelings of our He may represent its strengthening and purifying effect upon the sufferer, and its softening and elevating power upon those who witness it. His audience or his readers may admire the example, but they will feel no desire to imitate it. They may look with awe and respect upon the deed of the Roman, who held his hand in the flames because it had failed to destroy the enemy of his country; but it is as they would look upon any great work of art, without being conscious of the wish or the power to copy it. The doctrines of the Stoics find no favor in our day; and the man who maintains that pain is no evil, is regarded simply as a madman. Roman and Spartan virtues of stern fortitude and endurance, are considered as belonging to a far remoter antiquity than the vases of Herculaneum and Pompeii. Pain is regarded as the greatest of physical evils. Whatever has a tendency to relieve it is grasped with eagerness, and esteemed one of the greatest of blessings.

Etherization, as is well known, was first used in dentistry and in surgery. It was employed in the latter branch at the

Massachusetts General Hospital, in October, 1846. Since then, it has been in constant use there, and has spread far and wide over our country and Europe. From its general adoption into the practice of distinguished and cautious surgeons in England, as well as in our own land, its powers and safety in surgical operations may be considered as thoroughly tested and established.

The question discussed in the volume now before us is one of more general interest. No one can be sure, indeed, that he may not meet with an accident, or be attacked by a disease, which will render a surgical operation necessary. Still, each one hopes that he may escape this necessity, and that he shall not need the ether for himself. But there are few men who do not expect to sustain the relations of husband and father, few women who do not expect to become wives and mothers. What mother is there, who does not wish that her daughter may be spared the sufferings which she herself has experienced? Where is the married woman, who, looking forward to the time when she must encounter these sufferings, does not catch eagerly at the idea of any remedy for them? But we may go still further. Dr. Channing alludes to the objection which has been offered, that the sufferings of childbirth are not of sufficient importance to render necessary a powerful agent for their removal. Now, even if this were so, and the mere relief of pain were considered of no importance, there would still be strong reasons for the use of ether. Many valuable lives have been lost to their families and the community, which might have been saved, if this discovery had been made earlier. In many individuals of the softer sex there is so great a degree of physical as well as mental sensibility, that they cannot bear a great amount or long continuance of pain. The patient either sinks at once under her sufferings, or a lingering disease is induced, from which she escapes narrowly and with a shattered constitution. In this class are found some of the greatest ornaments of society, persons who with extreme sensibility often combine the greatest attractions of mind and person. It is our firm belief that, in many of these cases, life might have been saved, and in others, lingering disease and intense suffering prevented, by the use of anæsthetic agents. So much has been said of etherization as a remedy for pain, that too little attention has

been paid to its more important but more remote effect in preserving life and health. We do not say that it prevents danger in all cases, or in those of an ordinary character; but in severe cases, and in such as we have just alluded to, it often becomes an agent of vital importance.

The position which Dr. Channing has held for many years as Professor of Midwifery in Harvard University, and his long and extensive experience in this department of Medicine, qualify him in a remarkable degree for the work which he has undertaken. Before commencing it, he addressed a circular letter to many physicians of Boston and its vicinity, containing questions upon the most important points in relation to his subject. He considered it as already proved that pain might be abolished by etherization, and the voluntary or animal power very much, if not wholly, suspended, organic power remaining; in other words, that while consciousness of pain and the power of the will were suspended, the action of the heart, lungs, and all other important organs went on undisturbed. The object of his inquiry, therefore, was directed chiefly to the safety of etherization.

The word 'etherization' Dr. Channing uses to embrace the effects produced by sulphuric or chloric ether, chloroform,

or any similar agent.

After explaining the general plan and objects of his work, and giving a brief account of the history of etherization, our author enters into an interesting examination of its physiological effects. To illustrate the effect upon the circulation, he mentions an experiment which he witnessed, performed by Dr. Perkins, of Newburyport. A frog was etherized, and the web of its foot brought into the field of a powerful compound microscope. At first, no motion in the minute vessels was perceived; but soon there was a slight movement at the edge "It gradually increased, when you saw a nearest the body. fluid, the components of which were perfectly visible, slowly passing along the course of the vessel. Two of the components were sufficiently distinguished from each other, — the blood globules and the lymph globules." The motion of these globules was very distinctly observed; — at first, as we. have said, there was perfect rest. Then the motion commenced; this was the first sign of recovery from etherization. Under a slight dose of ether, the circulation in the capillaries,

or minute vessels, is uninterrupted; under a larger dose, the circulation stagnates. As the effects pass off, the motion of the globules is gradually renewed. According to Dr. Perkins, chloroform differs from ether, when tried on the frog, "in its more rapid, energetic, and prolonged action upon the animal; in a more marked and perfect annihilation, rather than suspension, of the capillary circulation (the smaller vessels appearing entirely empty,) and in the more sudden and perfect restoration of muscular action as its influence passed away." The sensation of pricking or tingling, like that of a limb asleep, as it is called, which sometimes occurs before complete etherization, but more frequently after it, is accounted for by this stagnation of blood in the minute vessels.

Etherization affects the head by producing the sensation of noise, dizziness, confusion, and excitement, which is sometimes pleasurable and sometimes the reverse, unconsciousness, and insensibility. Our author observes that he has never known these effects continue after the general effect had ceased. Dr. Channing remarks that etherization does just what sleep does, allowing the functions of the organ to go on without the

pain being perceived. It is profound sleep.

The effect of ether or chloroform upon muscular action is an important part of the subject. We should naturally suppose, that a powerful agent producing the effects which have been described, would paralyze all action in the system, and hence that the process by which a child is born could not go on. To some physicians, it has appeared that this was the case, and that delivery was essentially retarded. We find, in the correspondence printed in this volume, the opinions of some, that muscular action was suspended or delayed. Dr. Channing's experience leads to a different opinion. He believes that ether and chloroform have the power of suspending only the voluntary efforts, while the organic actions go on even better when left to themselves. Thus irregular action only is suspended, whilst the proper action of the organ proceeds undisturbed.

The cessation of the patient's cries and of the voluntary efforts, it is true, may seem to favor this conclusion; but it may be questioned, whether, upon a full dose (of chloroform, especially, as this is most prompt in its effects) being given, there does not occur at once a perfect calm, in which there is

a prompt and total cessation of uterine action? So, at least, it has appeared in the cases we have witnessed. mentary cessation of motion of the blood in the vessels of the frog's foot, would lead us to expect that the action in childbirth would be arrested in like manner. When an accident, or any untoward circumstance, arises to bring on premature muscular action, opium is often given, and is often successful in arresting this action until the proper time. We very much doubt whether complete etherization would not essentially delay delivery. Fortunately, only partial etherization is required, and the organic action, if delayed for the moment, is speedily resumed. This is no argument, then, against the use of the agent; but merely one for delaying it whilst the organic efforts are slight, and therefore more readily retarded. While these are not strong, they are more easily checked, and by the continued use of the ether or chloroform, a highly irritable state is produced in the patient, which is very unfavorable for her speedy relief.

Respiration becomes slower during etherization, and is sometimes noiseless. Dr. Channing has rarely met with the loud breathing, or snoring, noticed by Prof. Simpson.

The pulse at first becomes more rapid, but soon returns to its natural beat, and sometimes falls below it. There is sometimes a striking diminution in its frequency, and an increase in its force. This slowness of the pulse is an indication of full etherization, and shows that it is time to stop inhaling. The stomach is the only one of the digestive organs that is disturbed; nausea and vomiting have sometimes occurred. Dr. Channing says he has met with but one case of the latter, and this was after the use of chloric ether; and he has not more than once or twice observed nausea. Nor does he find that a single one of his correspondents has noticed either of these conditions of the stomach; on the contrary, ether and chloroform have been found to relieve these symptoms when they existed.

Our author proceeds to consider the manner in which etherization is produced, together with its conditions, signs, and results. Sulphuric ether was the agent first discovered, and its effects have been longer and more generally tested than the others. In order to avoid the cough and difficult breathing sometimes produced by sulphuric ether, Mr. Lawrence

employed chloric ether, and found it answer perfectly well. Prof. Simpson subsequently made experiments with various gases for the same purpose, and employing chloroform among other articles, he found reason to prefer it to all other preparations. He was led to do so, in consequence of the small quantity required; from its acting sooner and more persistently than sulphuric ether; and from its being more grateful to the patient and less expensive. At the Massachusetts General Hospital, the chloric has been substituted for the sulphuric ether, and continues to be used there. Chloric ether is a solution of chloroform in spirit and water. A compound ether has been formed of a solution of chloroform in sulphuric ether; but its merits have not yet been sufficiently tested. We doubt not that some other preparations will yet be discovered, having similar powers.

The safety of etherization must depend upon the conditions under which it is used. These conditions relate to the article chosen for an inhaler, to the mode of using it, to the present state of the patient, and to the particular effects of inhalation that are observed in each case. In regard to the instrument, the safest and best inhaler, our author says, is that which allows the freest escape of the expired air, and has also a free opening to admit pure air to the sponge. He recommends a very simple instrument, made of pasteboard, of a conical shape, with a sponge at the bottom, and a valve to allow egress to the expired air. The apex of the cone, not being closed, allows the pure air access to the sponge. The sponge should be washed in alcohol each time after use, to prevent the residuum from rendering the ether impure. A ball of cotton slightly wetted with chloroform, and wrapped in a narrow strip of cotton batting, answers well and is safe, provided it be so managed that the exit of the expired air and entrance of pure air are freely permitted. Prof. Simpson uses a handkerchief for chloroform; and although he recommends rapid etherization, administers only thirty drops at one time. We believe that a sponge for ether and a handkerchief for chloroform, have pretty generally taken the place of instruments for They are always easily procured, and answer equally well, if the conditions above stated are observed.

Dr. Channing next considers etherization in its particular relation to the subject of his book.

"In pregnancy, new and important agencies are at work. A new function, suddenly induced, and rapidly developing itself, both in its local and general agencies, has been established. An extraordinary vitality prevails everywhere. The blood gets new characters, and those, too, of an intenser life. Respiration is more rapid and fuller. The temperature is increased. Excretions undergo very remarkable changes. A new being is growing, getting nourishment, and every hour developing a higher vitality, in this mysterious condition." p. 75.

In childbirth, there is not a new action just commenced, but merely a continuance of the same action that has been going on through pregnancy. According to Dr. Channing, if this action is uninterrupted before the proper time, the muscular contractions commence, and delivery is accomplished suddenly, and without pain. Pain, therefore, is not a necessary attendant upon childbirth. The organic contractions here spoken of, being generally attended with suffering, are commonly called "pains" even among medical men; and hence the idea that pain is necessary for the birth. Now, as irregular or premature contractions are often brought on by mental or accidental causes, etherization, by quieting the voluntary and irregular efforts, and at the same time subduing the pain, produces painless labor exactly like that above described.

The state of entire health and augmented vitality in pregnancy forms a striking contrast to the condition of patients etherized while undergoing surgical operations. This is considered as one reason for the more uniformly salutary effects experienced in obstetric practice. Here it is not necessary that the etherization should be complete, or continued without intermission; and whatever may be the dangers of etherization, they cannot be so great as when the patient must be kept for some time under its full influence. In important surgical operations, as well as in the cases which form our particular subject, there is a considerable loss of blood, which contributes to the safety of etherization; while in the slighter operations, such as tooth pulling, there is but a trifling loss of blood, if any; and the shock is at the same time more sud-Hence, these slight operations have been attended with less favorable results. Ether has been constantly used, as we have said, at the Massachusetts Hospital. There has been

only one unfavorable case; and in this there was nothing to connect the bad result with the use of the ether, as the severity of the operation was a sufficient cause of death. The influence of etherization is kept up more easily than it is produced; and hence caution is required in its administration. In cases of childbirth, the patient may, in general, regulate this for herself. In the intervals of the uterine contractions, etherization is not required; but as soon as the contractions return, the patient eagerly demands it again.

Dr. Channing says that the success of etherization in midwifery has been perfect. He does not remember a case in which it has not been entirely useful both to mother and child.

"From the very first case down to the latest, I have seen nothing in any of them to diminish my confidence, or to lead me to a conclusion, that it is not proper in any case of labor, or that it has been injurious or unsafe in any one. The evidence from all others who have been consulted by me is to the same general purport."

The coexistence of disease affords no reason why we should omit etherization. On the contrary, it has been found serviceable in phthisis, asthma, cough, affections of the heart, and even in cholera, approaching the form of the Asiatic. In delirium tremens, it bids fair to become of the greatest utility. Dr. Channing's experience is confirmed by that of Prof. Simpson, who has applied it in every case of labor since he commenced its use.

In regard to the fears which have been excited by the unfavorable cases of etherization, Dr. Channing remarks upon the popular tendency to confound the post hoc with the propter hoc,—to consider that as an effect which is only a sequence. In some of these cases, death occurred from the improper manner in which the gas was used; and in others, from the excessive quantity employed. In other cases again, death was the result of the operation, or of the previous disease, and in nowise attributable to the ether or chloroform.

Our author notices some of the unfavorable cases which have been published, principally in the newspapers. One occurred in New York. A man with diseased lungs suffered from a cause that required two slight surgical operations, which were painful, but attended with little loss of blood.

The first operation was performed while he was under the influence of chloroform, and had no unpleasant effects. About a month after, another similar operation was attempted. The patient was placed under the influence of chloroform, of which only thirty drops were given. At the moment when the cut was made, he started, and after a slight convulsive movement expired. On a post mortem examination, the lungs were found greatly diseased; and this, not the chloroform, was believed to be the cause of death.

The case of Mr. A. W. Oliver, which was reported in the Bunker Hill Aurora as a death from chloroform, is next men-The statement was contradicted by Dr. Townsend, who was consulted in the case, and states that, after amputation of the leg near the body had been performed, symptoms appeared which led the surgeon to suspect a rupture of some internal organ. The previous injury, however, which required the operation, and the operation itself, were each a sufficient cause of death. The next case is that of Hannah Greener, of Newcastle, England, in which a coroner's jury brought in a verdict of death from congestion of the lungs, produced by chloroform. There are no medical reports of this case. Another case occurred at Cincinnati; a woman died under the influence of chloroform, which she took for the purpose of having a tooth drawn. The whole system was found to be in a most perfect state of health, lungs, heart, and all the other important organs of life being in the most healthy condition. A committee were satisfied that her death was caused by chloroform; it was supposed to have been given in too concentrated a form. It was administered in an air-tight inhaler, in which a sponge saturated with chloroform had been depos-Dr. Channing remarks that this woman was suffocated; the use of the air-tight inhaler, he says, "explains the whole matter — tells the whole story." The sponge saturated with chloroform deserves attention also. Dr. Channing calculates, from the statement, that it must have contained two or more ounces of the liquid. Chloroform appears to have been administered precisely as if it was ether. It is very probable that the preceding case would admit of a similar explanation. The congestion of the lungs that is there spoken of is the natural effect of suffocation.

Other cases are mentioned, in which unfavorable effects

were produced; but in these the agent was used for toothpulling, or for the mere purpose of curiosity or amusement. In regard to the alleged effects of anæsthetic agents in producing insanity, our author says he can find no facts which support the theory; it is advanced as theory only, not as fact. The only cases of puerperal mania which have come to his knowledge, since the introduction of ether, were cases in which this agent was *not* used.

"Suppose for a moment that ether had been used in these cases, how wide would have been the report! They would have spread on 'flying words' with lightning speed, over this whole country; and by the first steamer they would have found their way to Europe."

There is a case of insanity reported in the succeeding part of the volume, in which ether was used with excellent effect, obviating all the trouble and embarrassment which the condition of the patient had caused in a former confinement. It has also been supposed that convulsive disease might be caused by etherization. Our author has not met with a single instance. He has had grave cases of puerperal convulsions, in which ether was used as a remedy with excellent effects. Dr. Bartlett, of New Bedford, and Dr. Cabot, of Boston, have also reported cases in which it was used with great advantage.

In regard to the different preparations employed, Dr. Channing states that he has too little knowledge of chloric ether in childbirth to be able to offer any opinion of its merits. The claims of sulphuric ether rest upon its early and comparatively long use, its favorable results, its easy management, the longer continuance of its effects, and the smaller demand for its frequent and rapid repetition. The reasons against its use are, the larger quantity required to produce its effects, its disagreeable odor, and the length of time during which it continues to be exhaled from the lungs. There are other objections, founded on its influence in exciting cough, the time required before its effect is produced, its continuance after it has ceased to be desired, and finally on the mental and physical excitement which occasionally attend its use.

The claims of chloroform are based upon the readiness with which it effects its object, the small quantity required, its pleasant odor, and its rapid decomposition and disappear-

ance from the breath. The objections are, in brief, that the rapidity and power with which it produces its effects render it difficult to control them; and that untoward results have followed its use, though not in midwifery. But the evidence drawn from the correspondence published in this volume preponderates in favor of chloroform.

It is proper, however, that the practitioner should be able to recognize the unfavorable signs, and be prepared to obviate them. It is well known that there are in many individuals idiosyncracies, or peculiarities of constitution, which render a particular medicine or article of diet injurious. The same may be the case in regard to ether and chloroform. instances, there may be something unfavorable in the particular state of the individual at the time. If unfavorable effects occur, they are denoted by paleness and the livid aspect of the face and extremities, the slowness of the pulse, and the general signs of exhaustion. When these symptoms are observed, if inhalation is stopped, nothing serious ensues. A free supply of air should be afforded, without allowing the patient to become chilled. Friction should be freely Stimulating drinks, aromatic teas, wine, etc., are useful, but caution is required not to add too much to the stimulus already produced upon the brain. Camphorated spirits or rum may be applied to the forehead. Dr. Channing recollects only one case in which these symptoms were observed, and in this they were very slight. Affections of a spasmodic or hysterical nature have resulted from etherization in tooth-pulling. They may be treated with antispasmodics. and will generally soon disappear.

The state of entire rest, or quiet with apparent faintness, which succeeds etherization, sometimes continues for an hour or more, and may create uneasiness among the patient's friends. Catalepsy and other severe affections of a convulsive nature have occurred; the treatment should be the same as described above. Etherization does not interfere with the use of ergot, when this is required; on the contrary, its effects are more favorable when etherization is employed.

Dr. Channing proceeds to a consideration of the objections made to the use of ether and other anæsthetic agents in midwifery; first, of the argument that the suffering is too slight to require it. We suspect this objection is brought for-

ward by those who have never witnessed these sufferings, or certainly have never borne children. Who is there that can hear the earnest demand for relief, and see the eagerness with which any remedy is grasped at, without feeling an earnest desire to place it within reach? This question is one which we think patients will settle for themselves. There are very few now, who have not become aware of the existence of this remedy, and who do not earnestly beg for it, while they are under the influence of pain. But we have already said that there is a much higher advantage in the use of these agents; by preventing pain, life will often be saved, and lingering and dangerous disease be avoided.

The uncertainty and possible danger is the next objection. The answer to this is, that every day is rendering the uncertainty less, and giving additional proofs of the safety of etherization. Dr. Channing says it has already shown powers greater than those of any other medicinal agent.

We come next to the religious objection. Our author informs us that it was first brought forward in Scotland. is founded upon the passage in Genesis, "Unto the woman he said, In sorrow shalt thou bring forth children." Dr. Channing goes into a consideration of the text, which he thinks may bear a different construction from that commonly given to it. He refers also to a pamphlet which Prof. Simpson has written expressly to refute this objection. Verbal criticisms, however, will always be matter of controversy, and seldom meet with general acceptation. Perhaps the best answer is that of Dr. Chalmers, contained in a quotation from the pamphlet just mentioned. When Prof. Miller consented to write an article on Etherization for the North British Review, he mentioned this objection to Dr. Chalmers, who, after expressing his surprise, replied that if some small theologians took such an improper view of the subject, he would certainly advise Mr. Miller "not to heed them."

This idea proceeds from a very narrow view of the subject, which, if carried out, becomes absurd. Has not the same great Being, who pronounced the curse, the power to present to mankind the means of alleviating it; or has he ceased to preside over human affairs? If he has not this power and right, and the curse must remain in full force as in the time of Adam, let us be consistent. Sickness and death came in

consequence of this sentence; it is not lawful, therefore, to relieve sickness or to prevent death. The medical profession is abolished, and all the hosts of nostrum venders and manufacturers are prohibited. We must not avail ourselves of any of the tools used in agriculture, because it is said "cursed is the ground for thy sake;" nor must we root up the thorns and thistles it brings forth. If a man has received property from his father, he must divide it among the poor, and earn his own bread by the sweat of his brow, taking care never to acquire the means of future ease. Certainly, nothing can be plainer than this; if we may not use a remedy to remove the pain of childbirth, we have no right to earn the means of future ease for ourselves, and still less for our children. Were this opinion to be acted upon, there would be an end to all improvement; industry would be stopped, and the wheels of society would stand still. A more enlarged theology discerns the intention of Providence gradually to ameliorate the condition of our race, by allowing them to obtain, as the fruit of industry and exertion, the means of lessening labor and relieving pain. If the discovery of any medicine is a blessing to mankind, that blessing is granted as directly by Providence as the curse was given in the days of Adam.

Dr. Channing next proceeds to the moral objection, the amount of which is, that ether and chloroform may be used as means of intoxication, or for the mere purpose of amusement, and may thus produce injurious effects. may be said of laudanum, and of many of the most useful medicines. If it applies to etherization, how much more does it apply to the use of arsenic in medicine and in the arts, — a drug by which fearful mischief and crime have been perpetrated! Yet arsenic is allowed quietly to hold its place in commerce and medicine; we have never heard of any proposal to banish it. This objection to etherization applies The effects of chloroform are only while it is a novelty. too transient to be much resorted to as a means of intoxication; ether is disagreeable to most persons, and the continued use of any anæsthetic agent generally produces disgust and As long as better means of producing intoxication are accessible, we need not be anxious in regard to the vapors of ether and chloroform. When the efforts of the benevolent have effectually checked the use of alcohol, some restrictions upon the sale of these articles may become necessary.

The fifth and last objection is, that etherization may injure the child; this, our author observes, rests upon hypothesis merely. There is not the smallest evidence that this evil effect has ever occurred. Children born under the use of ether or chloroform exhibit as strong marks of intelligence and activity as those born before its discovery, and are "as sprightly and well behaved" as any.

We have now followed our author through his general discussion of the use of etherization in childbirth. He next gives in detail the history of seventy-eight cases attended by him, either in consultation or otherwise, in which this agent was employed. These cases will be found of much interest and value to medical men. Their general results, as far as our subject is concerned, have been already mentioned; they

were highly favorable.

Dr. Channing, as we have before said, addressed a letter to many of the physicians of Boston and its vicinity, respecting the most important points relating to the use of ether and chloroform, and their answers are contained in the latter part of the volume. In order that these results may be more conveniently examined, he has arranged them in tables. answers are given individually by the writers, without concert or communication with each other. Of course, they vary very much. Some are cautious in regard to its use; some give it only when asked for; others think it should only be given under certain circumstances. On the whole, however, we find a remarkable degree of unanimity in favor of etherization. It is a great deal to say, that, in this mass of testimony, no facts are brought forward against its safety, and no decided opinion given against it. We find the names of nearly all our most eminent physicians, whose evidence is given in its favor.

It may be said that our author writes with the zeal of an advocate, rather than with the coolness of an impartial investigator. Dr. Channing is well known for his zeal in the various benevolent enterprises of the day, and for his exertions for the amelioration and reform of social evils. The eagerness of his desire to extend the use of this remedy for pain might be supposed to carry him too far, did he give us theory and opinion only. But this is not the case. He has collected facts, from which all who are interested in the subject can

form their own conclusions. He has carefully brought under our view the principal cases which have come to a fatal issue, and has spoken freely of the dangers which attend the improper use of ether and chloroform. His evident zeal in the cause gives his book an interest which a mere inquiry would not have. It is too early yet to write a systematic treatise upon etherization. Our author has not aimed at this, but has industriously collected into a body the evidence which had accumulated, to aid the medical profession in forming their decision as to the free or cautious use of it, or whether they should abandon it entirely.

Our own conclusion from such an examination is, that ether or chloroform is a remedy of the utmost value, and may be used with perfect safety under the direction of a physician. We have alluded to the unfavorable effects of etherization, sufficiently to show that it is a highly dangerous agent in the hands of the rash or ignorant. It ought not to be used any more than calomel or laudanum, except under medical direction. Still less should it be used for the mere purpose of amusement. We conclude, also, from the same evidence, that its use is safer in midwifery and the larger surgical operations, than in the minor ones. Most of the unfavorable effects which have occurred took place when it was given for tooth-pulling. Pain and loss of blood may both be considered as counter-agents, which neutralize its effects, and render them more safe.

In is now somewhat more than twenty years since the Empire of Brazil emerged from the obscure existence of a

ART. III. — 1. Sketches of Residence and Travels in Brazil, embracing Historical and Geographical Notices of the Empire and its Several Provinces. By D. P. Kidder. New York: 1845. 2 vols. 8vo.

^{2.} Travels in the Interior of Brazil, principally through the Northern Provinces, and the Gold and Diamond Districts, during the years 1836-41. By G. GARDNER. London: 1846. 8vo.